CLAIMS

1. A piezoelectric actuator, having

- a multi-layered construction of piezoelectric layers (2) interleaved with inner electrodes (3, 4; 14, 15) and having
- an alternating contacting of the inner electrodes (3, 4; 14, 15) with outer electrodes (5, 6; 11), the regions between the outer electrodes (5, 6; 11) being provided with an insulation (12, 13), characterized in that
- an insulating layer (12, 13), which is comprised of a material with properties virtually identical to those of the piezoelectric layers (2), is applied to the outer surface of the piezoelectric actuator (1; 10) in the region between the outer electrodes (5, 6; 11).

2. The piezoelectric actuator according to claim 1, characterized in that

- the insulating layer (12, 13) encloses the edges of the piezoelectric actuator (1; 10).

3. The piezoelectric actuator according to claim 1 or 2, characterized in that

- the insulating material is slip.

4. The piezoelectric actuator according to one of the preceding claims, characterized in that

- the outer electrodes (5, 6; 11) are attached to regions of the insulating material that have been uncovered by grinding.

5. A method for manufacturing a piezoelectric actuator according to one of the preceding claims, characterized in that

- in a first process step, in the green state of the piezoelectric actuator (10) before the sintering, the insulating layer (12, 13) is applied to all of the external surfaces of the piezoelectric actuator (10) and
- after the sintering of the piezoelectric actuator (10), the regions (16, 17) in which the outer electrodes (5, 6; 11) are contacted, are uncovered.

6. The method according to claim 5, characterized in that

- the piezoelectric actuator (10) is dipped into the still fluid insulating layer or is wetted with it, either on all sides or on two sides.

7. The method according to claim 5 or 6, characterized in that

- the regions (16, 17) that are contacted by the outer electrodes (5, 6; 11) are uncovered by means of grinding.

8. The method according to claim 5 or 6, characterized in that

- the regions (16, 17) that are contacted by the outer electrodes (5, 6; 11) are uncovered by means of etching.